

- [0079] CCA clear channel assessment
- [0080] CSMA carrier sense multiple access
- [0081] DCF distributed coordination function
- [0082] IEEE Institute for Electrical and Electronics Engineers
- [0083] IFS interframe spacing
- [0084] MAC media access control
- [0085] STA station (non-AP)
- [0086] OFDMA orthogonal frequency division multiple access
- [0087] RSSI received signal strength indicator
- [0088] UL uplink
- [0089] WLAN wireless local area network (also known as Wi-Fi)

What is claimed is:

1. A method comprising:
 - selecting, by an apparatus, a first clear channel assessment threshold that is higher than a minimum clear channel assessment threshold;
 - determining to temporarily use a second clear channel assessment threshold that is lower than the first clear channel assessment threshold; and
 - based on determining, selecting the second clear channel assessment threshold for a specified time period.
2. The method according to claim 1, wherein determining to temporarily use the second clear channel assessment threshold is based on the apparatus' use of a spectrum relative to threshold usage level.
3. The method according to claim 2, wherein the apparatus' use of the spectrum relative to the threshold usage level is calculated over a predefined time period.
4. The method according to claim 2, wherein the apparatus' use of the spectrum relative to the threshold usage level is calculated as at least one of:
 - a number of successful transmissions by the apparatus on the spectrum over a predefined time period; and
 - a deferring time experienced by the apparatus with respect to the spectrum over a predefined time period.
5. The method according to claim 4, wherein the apparatus' use of the spectrum relative to the threshold usage level is calculated as the deferring time, the method further comprising:
 - tracking at the apparatus the deferring time that represents an amount of time over the predefined time period during which the apparatus experienced the spectrum to be busy;
 - transmitting to a radio access node the tracked deferring time;
 - receiving from the radio access node a target deferring time; and
 - comparing the tracked deferring time with the target deferring time.
6. The method according to claim 1, in which the specified time period comprises a backoff time during which the apparatus is prohibited from transmitting on a spectrum regardless of whether or not the apparatus senses the spectrum to be clear with respect to the second clear channel assessment threshold.
7. The method according to claim 6, the method further comprising:
 - if the apparatus senses the spectrum to be not clear with respect to the second clear channel assessment threshold during the backoff time, initiate a time counter and transmit on the spectrum if the apparatus senses the

spectrum to again be free with respect to a minimum clear channel assessment threshold at expiry of the time counter;

else if the apparatus senses the spectrum to be clear during the backoff time and if the apparatus senses the spectrum to be clear with respect to the second clear channel assessment threshold after the backoff time during the specified time period, transmit on the spectrum.

8. The method according to claim 1, wherein determining to temporarily use a second clear channel assessment threshold is triggered by a periodic timer.

9. The method according to claim 8, wherein the second clear channel assessment threshold is used during one interval of the periodic timer and the first clear channel assessment threshold is used during a second interval of the periodic timer.

10. The method according to claim 9, wherein at least one of the first interval and the second interval is:

specified in a radio access technology specification; or received by the apparatus in a broadcast message.

11. The method according to claim 1, in which a start of the specified time period is synchronized with that of other mobile radio devices in a cell or BSS.

12. An apparatus comprising:

at least one processor; and

at least one non-transitory memory including computer program code, the at least one memory and the computer program code configured to, with the at least one processor, cause the apparatus to:

select a first clear channel assessment threshold that is higher than a minimum clear channel assessment threshold;

determine to temporarily use a second clear channel assessment threshold that is lower than the first clear channel assessment threshold; and

based on said determining, select the second clear channel assessment threshold for a specified time period.

13. The apparatus according to claim 12, wherein determining to temporarily use the second clear channel assessment threshold is based on the apparatus' use of a spectrum relative to threshold usage level.

14. The apparatus according to claim 13, wherein the apparatus' use of the spectrum relative to the threshold usage level is calculated over a predefined time period.

15. The apparatus according to claim 13, wherein the apparatus' use of the spectrum relative to the threshold usage level is calculated as at least one of:

a number of successful transmissions by the apparatus on the spectrum over a predefined time period; and

a deferring time experienced by the apparatus with respect to the spectrum over a predefined time period.

16. The apparatus according to claim 12, in which the specified time period comprises a backoff time during which the apparatus is prohibited from transmitting on a spectrum regardless of whether or not the apparatus senses the spectrum to be clear with respect to the second clear channel assessment threshold.

17. The apparatus according to claim 16, the method further comprising:

if the apparatus senses the spectrum to be not clear with respect to the second clear channel assessment threshold during the backoff time, initiate a time counter and transmit on the spectrum if the apparatus senses the